Ex 3 pag 50

**type** ani = 1960..2000;

Tren=^celula;

celula = **record**

nr: integer;

statia: string;

anul:ani;

tipul:string;

capacitatea: real;

propr: string;

prec: Tren;

**end**;

**var** P: tren; i: integer;

c:char;

**procedure** citire;

**var** R: tren; i:integer;

**begin**

**begin**

**new**(R);

Writeln('introduceti nr de inmatriculare:');readln(R^.nr);

Writeln('introduceti statia');readln(R^.statia);

Writeln('introduceti anul fabricarii');readln(R^.anul);

Writeln('introduceti tipul vagonului');readln(R^.tipul);

Writeln('introduceti capacitatea');readln(R^.capacitatea);

Writeln('introduceti proprietatea');readln(R^.propr);

R^.prec:=P; P:=R;

**end**;

**end**;

**procedure** Extrag;

**var** R : Tren;

**begin**

**if** P=nil **then** writeln('Stiva este vidă')

**else begin**

R:=P;

write('Este extras');

writeln(' elementul:');

writeln (R^.nr);writeln (R^.statia);writeln (R^.anul);writeln (R^.tipul) ;writeln (R^.capacitatea); writeln(R^.propr);

P:=P^.prec;

dispose(R);

**end**;

**end**;

**procedure** afis;

**var** R: tren;

**begin**

R:=P;

**while** R<>nil **do**

**begin**

writeln (R^.nr);writeln (R^.statia);writeln (R^.anul);writeln (R^.tipul) ;writeln (R^.capacitatea); writeln(R^.propr);

R:=R^.prec;

**end**;

**end**;

**begin**

P:=nil;

**repeat**

readln(c);

**case** c **of**

'I' : citire;

'A' : Afis;

'E' : Extrag;

'O' :

**else** writeln('optiune necunoscuta')

**end**;

**until** c='O';

**end**.

Ex 4 pag 50

**type** ani = 1930..1985;

angajat=^celula;

celula = **record**

nume:string;

prenume: string;

anulnasterii:ani;

dataangajarii: string;

prec: Angajat;

**end**;

**var** P: angajat; i: integer;

c:char;

**procedure** citire;

**var** R: angajat; i:integer;

**begin**

**begin**

**new**(R);

Writeln('introduceti numele:');readln(R^.nume);

Writeln('introduceti prenumele');readln(R^.prenume);

Writeln('introduceti anul ');readln(R^.anulnasterii);

Writeln('introduceti data angajarii');readln(R^.dataangajarii);

R^.prec:=P; P:=R;

**end**;

**end**;

**procedure** Extrag;

**var** R : angajat;

**begin**

**if** P=nil **then** writeln('Stiva este vidă')

**else begin**

R:=P;

write('Este extras');

writeln(' elementul:');

writeln (R^.nume);writeln (R^.prenume);writeln (R^.anulnasterii);writeln (R^.dataangajarii) ;

P:=P^.prec;

dispose(R);

**end**;

**end**;

**procedure** afis;

**var** R: angajat;

**begin**

**if** P=nil **then** writeln(' nu sunt angajati')

**else begin**

R:=P;

**while** R<>nil **do**

**begin**

writeln (R^.nume);writeln (R^.prenume);writeln (R^.anulnasterii);writeln (R^.dataangajarii) ;

R:=R^.prec;

**end**;

**end**;

**end**;

**begin**

P:=nil;

**repeat**

readln(c);

**case** c **of**

'I' : citire;

'A' : Afis;

'E' : Extrag;

'O' :

**else** writeln('optiune necunoscuta')

**end**;

**until** c='O';

**end**.

Ex 2 pag 54

**Program** P128;

**type** Avion=^Celula;

Celula=**record**

nr : integer;

tipul:string;

ruta:integer;

Urm : Avion;

**end**;

**var** P,

U : Avion;

c : char;

**procedure** Introduc;

**var** R : Avion;

**begin**

**new**(R);

write('Daţi elementul ce urmează');

writeln(' să fie introdus:');

readln(R^.nr);

readln(R^.tipul);

readln(R^.ruta);

R^.Urm:=nil;

**if** P=nil **then begin** P:=R; U:=R **end**

**else begin** U^.Urm:=R; U:=R **end**;

**end**;

**procedure** Extrag;

**var** R : Avion;

**begin**

**if** P=nil **then** writeln('Coada este vidă')

**else begin**

R:=P;

write('Este extras');

writeln(' elementul:');

writeln(R^.nr);

writeln(R^.tipul);

writeln(R^.ruta);

P:=P^.Urm;

dispose(R);

**end**;

**end**;

**procedure** Afis;

**var** R : Avion;

**begin**

**if** P=nil **then** writeln('Coada este vidă')

**else begin**

write('Coada include');

writeln(' elementele:');

R:=P;

**while** R<>nil **do**

**begin**

writeln(R^.nr);

writeln(R^.tipul);

writeln(R^.ruta);

R:=R^.Urm;

**end**;

**end**;

readln;

**end**;

**begin**

P:=nil; U:=nil;

**repeat**

readln(c);

**case** c **of**

'I' : Introduc;

'E' : Extrag;

'A' : Afis;

'O' :

**else** writeln('Opţiune necunoscută')

**end**;

**until** c='O';

**end**.